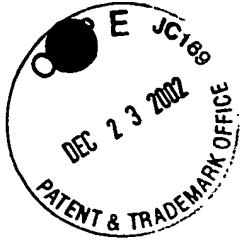


REMARKS:



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The examiner is thanked for the Office Action of September 27, 2002. In response thereto, applicants have amended claims 1, 9 and 11-13. Claims 7-8 have been cancelled, and new claims 15-19 have been added. No new matter has been added.

Applicants respectfully request reconsideration of the application in amended form.

The examiner objected to the drawings under 37 CFR §1.83(a). Specifically, the examiner stated that several pairs of complementary engagement elements must be shown or the features canceled from the claim. In claim 14, applicant claims "that the filler neck (23) and the closure cap (1) have several pairs of complementary engagement elements (7, 8, 25, 26)". Applicant respectfully traverses this objection. Several pairs of engagement elements are shown in Figures 3 and 4 (i.e. more than one pair of engagement elements). Engagement groove 7 and engagement projection 25 comprise one pair of engagement elements. Engagement groove 8 and engagement projection 26 comprise a second pair of engagement elements. Each pair is clearly shown in Figures 3-

4. In addition, the depicted embodiment is the preferred embodiment, wherein the filler neck and the closure cap have several (preferably two) pairs of complementary engagement elements, as noted in the specification. (See Specification, page 5, lines 16-22). Therefore, the examiner's objection should be withdrawn.

The examiner has also rejected claim 14 under 35 U.S.C. §112, first paragraph, as containing subject matter not described in the specification. As noted above, the disclosure in the specification, and the figures, provide for several pairs of

complementary engagement elements. In fact, two pairs of complementary elements is the preferred embodiment.

The examiner has also objected to the title of the invention. In response thereto, applicants have amended the title to “FILLER DEVICE AND CLOSURE CAP HAVING COMPLEMENTARY ENGAGEMENT ELEMENTS”. Applicants submit that the amended title clarifies the invention, and provides for an inventive feature (i.e. complementary engagement elements) in the present invention.

The examiner has rejected claims 1-14 under 35 U.S.C. §112, second paragraph, as being indefinite. In response thereto, applicants have amended claims 1, 9 and 11-13. The limitations of claims 7-8 have been incorporated into independent claim 1, and claims 7-8 have been cancelled. Applicants have amended the claims in light of the examiner’s rejections, and submit that all of the rejections have been overcome in the pending claims as amended.

Claims 1-13 have been rejected as anticipated by Hagano et al. (U.S. Patent No. 6,202,882). The examiner specifically references column 7, paragraph 3 of the ‘882 patent. Applicants respectfully traverse these rejections. Hagano et al. fails to disclose an engagement element wherein resistance is generated in a movement region, whereby the movement region includes an axial path and a circumferential path, as claimed by applicants. Rather, Hagano et al. provides for an engaging part that elastically deforms in the circumferential direction, and thereafter releases and may be screwed into a secure position.

The engaging structure disclosed in Hagano et al. is similar to that discussed by applicants in the background information in the specification. Conventional engagement

elements form a threaded closure, with twist preventers that increase the resistance to movement in a specific movement region. Such conventional engagement elements comprise locking lugs that project radially outward from the bottom of the engagement grooves and are elastically deflectable radially inward, and over which the engagement projections travel briefly increasing resistance to movement as the cap is twisted on. (See Specification, page 3, lines 3-12).

Regarding such conventional engagement elements, "it has been found in practical use, however, that when the closure cap is operated, it is erroneously assumed that the final position has been reached when the resistance to movement increases because the locking lugs are being approached. The closure cap is then not rotated further, and from then on is unsecured." (See Specification, page 3, lines 16-19).

In the present invention, resistance is provided in the axial path and circumferential path, to provide a secure fit even if the cap is not rotated to a final position on the circumferential path. Thus, the claimed locking device is effective when the engagement projections are at an intermediate position on the circumferential path. Applicants have amended claim 1 to clarify this feature, and limitations from claims 7-8 have been incorporated therein. It is submitted that claims 1-6 and 9-13 now distinguish over Hagano et al.

Claims 1-3 and 9-13 were rejected as anticipated by Schliemann et al. (U.S. Patent No. 6,109,467). The '467 patent also fails to disclose engagement elements which provide resistance in both the axial and circumferential paths, as claimed by applicants. Rather, Schliemann et al. is directed to a closure cap that may be safely removed without creating excess internal pressure. The '467 patent notes that "the decisive advantage of

the present invention is that first the seal at the end face of the fill socket is effortlessly lifted off the rim of the fill socket and then a greater torque must be applied in the removal direction. The removal of the closure cap in any case can take place only after the excess interior pressure of the container has been released.” (See ‘467 patent, column 2, lines 33-38). Thus, the ‘467 patent provides for an engagement that creates a delay for releasing pressure. However, it fails to disclose a resistance in both an axial path and circumferential path (i.e. the movement region), as claimed in the present invention. Therefore, the claims, as amended, distinguish over Schliemann et al.

The examiner also rejected claims 1-2 as anticipated by Welty et al. (U.S. Patent No. 3,127,049). The ‘049 patent does not disclose a locking device that generates resistance as claimed by applicant. Rather, Welty et al. simply provides for conventional engagement elements forming a threaded closure. Such an arrangement does not provide a safe and secure closure required for devices such as on an internal combustion engine. (See Specification, page 2, line 17 – page 2, line 2). Therefore, claims 1-2, as amended, clearly distinguish over Welty et al.

Claim 14 has also been rejected as obvious over Schliemann et al., as well as Hagano et al. Claim 14 depends from amended claim 1, and therefrom is distinguishable from Schliemann et al. and Hagano et al. for all of the reasons set forth above.

WHEREFORE, applicants respectfully assert that the claims 1-6 and 9-14, as amended, and new claims 15-19, are now in condition for allowance, and earnestly solicit same. It is believed that no fee is due with this submission. Should that determination be incorrect, then please debit Account No. 50-0548 and notify the undersigned.

Respectfully submitted,



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APPENDIX A: Marked Up Version of Specification

On page 1, line 23, the specification has been amended as follows:

--Title of the Invention: FILLER DEVICE AND CLOSURE CAP WITH
COMPLEMENTARY ENGAGEMENT ELEMENTS--

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APPENDIX B: Marked Up Version of Claims with Underlining and Bracketing

1. A filler device having a filler neck (23) and a closure cap (1), the closure cap (1) having [which has] an engagement segment (4), the engagement segment (4) and filler neck (23) having complementary engagement elements (7, 8, 25, 26), [for example in order to form a threaded or bayonet connection,] which can be brought, by movement of the closure cap (1) with respect to the filler neck (23), from an initial position [without engagement via an engagement path subsequent thereto] into a final position, [and vice versa;] a locking device (13, 14) [which] operably associated with and preventing [prevents] the closure cap (1) from falling off [by itself being arranged and configured in such a way that it] which generates [an elevated] a resistance to movement in a [specific] movement region of the closure cap (1), the movement region comprising an axial path for the closure cap (1) to the initial position, and from the initial position a circumferential path to the final position, characterized in that the locking device (13, 14) is [arranged in such a way that it is] effective [at a distance from the final position] intermediate the initial position and the final position.

9. The filler device as defined in Claim 1, characterized in that the locking device (13, 14) has a resiliently deflectable locking lug (15, 16) on one of the [parts (])filler neck (23) [or] and the closure cap (1)], which is located in the

movement region [of one engagement element (25, 26) against the other part (23)].

11. The filler device as defined in Claim 10, characterized in that the [neck-mounted engagement element] filler neck has an engagement projection (25, 26), and the [cap-mounted engagement element] closure cap has an engagement groove (7, 8) for engaging said engagement projection.
12. The filler device as defined in Claim 11, characterized in that the [cap-mounted] engagement [element] groove (7, 8) has an axial segment and a circumferential segment.
13. The filler device as defined in Claim 11, characterized in that the locking lug (13, 14) is arranged at the transition from the axial path to the circumferential [segment] path, and has inclined ramps (19, 20, 21, 22) in the axial and the radial direction.